UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

ECOLOGICAL SITE DESCRIPTION

ECOLOGICAL SITE CHARACTERISTICS

Site Type: Rangeland

Site ID: R036XA002NM

Site Name: Clayey

Precipitation or Climate Zone: 9 to 14 inches

Phase:

PHYSIOGRAPHIC FEATURES

Narrative:

This site occurs on upland drainageways, broad valleys and adjacent low hills and benches. Shallow rivulets that will develop into deep gullies when the vegetation has deteriorated may dissect the site. Slopes range from 1 to 10 percent. Elevations range from 6,000 to 7,500 feet above sea level

Land Form:

1. Flood-plain splay
2. Drainageway
3.

Aspect:

1. North
2. West
3. South

	Minimum	Maximum
Elevation (feet)	6,000	7,500
Slope (percent)	1	10
Water Table Depth (inches)	N/A	N/A

Flooding:	**Minimum**	**Maximum**
Frequency	Rare	Occasional
Duration	Very brief	Brief

Ponding:	**Minimum**	**Maximum**
Depth (inches)	N/A	N/A
Frequency	N/A	N/A
Duration	N/A	N/A

Runoff Class:

Medium to very high.

CLIMATIC FEATURES

Narrative:

Approximately 60 percent of the precipitation is received during the native plant growth period, April through September. During July, August and September 4 to 5 inches of precipitation influences the presence and production of warm-season plants. Fall and spring moisture aids growth of cool-season plants. Summer moisture is characterized by localized thunderstorms and snow and light rain characterize winter moisture.

Mean annual temperatures vary from 64 degrees F in July to 21 degrees F in January. Maximum temperature is near 100 degrees F and minimum is near – 38 degrees F. Average last killing frost in the spring is around mid-May and first killing frost in the fall is late September or early October. Freezing temperatures have been recorded in every month except July and August.

Wind velocities are relatively light most of the year with stronger winds occurring in spring and early summer. High winds increase transpiration rates and dry soil surfaces

Climate data was obtained from the WCCR web site. Using 50% probabilities for freeze-free and frost-free seasons at 28.5 degrees F and 32.5 degrees F respectively.

	Minimum	**Maximum**
Frost-free period (days):	104	119
Freeze-free period (days):	134	145
Mean annual precipitation (inches):	9	14

Monthly moisture (inches) and temperature (^{0}F) distribution:

	Precip. Min.	Precip. Max.	Temp. Min.	Temp. Max.
January	.52	1.79	7.6	45.6
February	.43	1.56	10.7	50.4
March	.67	1.92	16.8	56.8
April	.52	1.26	22.7	66.0
May	.62	1.26	28.8	75.5
June	.49	1.21	35.1	85.8
July	1.54	3.41	42.1	88.9
August	1.86	3.72	41.8	85.8
September	1.08	1.86	34,6	78.8
October	1.01	1.86	25.3	68.8
November	.71	1.60	16.2	56.0
December	.56	1.49	9.3	47.0

Climate Stations:

				Period		
Station ID	292241	Location	Cuba, NM	From: 01/01/14	To:	12/31/01
Station ID	293422	Location	Gallup FAA AP, NM	From: 01/01/21	To:	12/31/01

INFLUENCING WATER FEATURES

Narrative:

This site is not influenced by water from a wetland or stream.

Wetland description:

System	Subsystem	Class
N/A		

If Riverine Wetland System enter Rosgen Stream Type:

N/A

REPRESENTATIVE SOIL FEATURES

Narrative:

Soils are moderately deep to deep. Surface textures are medium to fine textured with a fine textured subsoil. Some surface coarse fragments may be present, especially when adjacent to interbedded sandstone and shale sites. Permeability is moderately slow to slow, water-holding capacity is high and runoff is medium to rapid.

Parent Material Kind: Overbank deposits

Parent Material Origin: Limestone - Shale

Surface Texture:

1. Silty clay loam
2. Clay
3. Clay loam

Surface Texture Modifier:

1. N/A
2.
3.

Subsurface Texture Group: Silty clay loam
Surface Fragments <=3" (% Cover): N/A
Surface Fragments >3" (% Cover): N/A
Subsurface Fragments <=3" (%Volume): N/A
Subsurface Fragments >=3" (%Volume): N/A

	Minimum	Maximum
Drainage Class:	Well	Well
Permeability Class:	Slow	Moderately slow
Depth (inches):	18	>72
Electrical Conductivity (mmhos/cm):	0.00	4.00
Sodium Absorption Ratio:	0.00	10.00
Soil Reaction (1:1 Water):	6.6	9.0
Soil Reaction (0.1M CaCl2):	N/A	N/A
Available Water Capacity (inches):	9	12
Calcium Carbonate Equivalent (percent):	N/A	N/A

PLANT COMMUNITIES

Ecological Dynamics of the Site:

Plant Communities and Transitional Pathways (diagram)

Plant Community Name: Historic Climax Plant Community

Plant Community Sequence Number: 1 **Narrative Label**: HCPC

Plant Community Narrative: Historic Climax Plant Community
This is a grassland site with fourwing saltbush and big sagebrush forming a shrub savannah aspect. Pinyon and juniper trees, if any, are scattered. Forbs are conspicuous throughout the site. With continuous heavy grazing and negative climate factors (drought etc.), the health of the site will decline with big sagebrush and rabbitbrush invading and becoming predominant.

Canopy Cover:	
Trees, shrubs and half-shrubs	8 %
Ground Cover (Aveage Percent of Surface Area).	
Grasses & Forbs	25
Bare ground	50
Surface gravel	5
Surface cobble and stone	0
Litter (percent)	20
Litter (average depth in cm.)	2

Plant Community Annual Production (by plant type):

Annual Production (lbs/ac)

Plant Type	Low	RV	High
Grass/Grasslike	468	702	936
Forb	42	63	84
Tree/Shrub/Vine	60	90	120
Lichen			
Moss			
Microbiotic Crusts			
Total	600	900	1,200

Plant Community Composition and Group Annual Production: Plant species are grouped by annual production **not** by functional groups.

Plant Type - Grass/Grasslike

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
1	PASM	Western Wheatgrass	180 – 270	180 – 270
2	SPAI	Alkali Sacaton	135 – 225	135 – 225
3	ELEL5	Bottlebrush Squirreltail	45 – 90	45 – 90
4	POFE KOMA	Muttongrass Prairie Junegrass	45 – 90	45 – 90
5	PLJA	Galleta	45 – 63	45 – 63
6	MUWR	Spike Muhly	27 – 45	27 – 45
7	BOGR2	Blue Grama	27 – 45	27 - 45
8	ACHY 2GRAM	Indian Ricegrass Other Grasses.	27 – 45	27 - 45

Plant Type - Forb

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
9	ARDO3 ERFL SPHAE ERIOG CIRSI 2FORBS	Green Sagewort Trailing Fleabane Globemallow spp. Wild Buckwheat Thistle spp. Other Forbs	45 – 72	45 - 72

Plant Type – Tree/Shrub/Vine

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
10	ATCA2 ATCO	Fourwing Saltbush Shadscale	45 – 72	45 – 72
11	ARTR2 ARTEM	Big Sagebrush Low Sagebrush	45 – 72	45 – 72
12	KRLA2 ERNAN5 TECA2 2SD	Winterfat Rabbitbrush Spineless Horsebrush Other Shrubs	27 – 45	27 – 45

Plant Type - Lichen

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Type - Moss

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Type - Microbiotic Crusts

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Other species include: silver bluestem, ring muhly, mat muhly, sixweeks fescue, cheatgrass, threeawn spp., Russian thistle, locoweed spp., Apacheplume, cholla cactus, black greasewood, juniper and pinyon.

Plant Growth Curves

Growth Curve ID **0002NM**

Growth Curve Name: **HCPC**

Growth Curve Description: **Grassland with fourwing saltbush and big sagebrush forming a shrub savannah aspect with scattered pinyon/juniper and forbs.**

Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
0	0	3	5	10	10	25	30	12	5	0	0

ECOLOGICAL SITE INTERPRETATIONS

Animal Community:

Habitat for Wildlife:

No Data

Hydrology Functions:

The runoff curve numbers are determined by field investigations using hydrologic cover conditions and hydrologic soil groups.

Hydrologic Interpretations	
Soil Series	Hydrologic Group

Recreational Uses:

This site is not noted for its natural beauty or recreational value.

Wood Products:

No significant wood products are produced on this site.

Other Products:

Grazing:

Approximately 90 percent of the vegetation produced on this site are suitable forage for domestic livestock or wildlife. Grazing distribution need not be a problem as long as waterings and saltings are adequately located.

Deterioration of the potential plant community is indicated by a decrease in western wheatgrass, muttongrass, prairie junegrass, spike muhly and fourwing saltbush. Those that increase include alkali sacaton, bottlebrush squirreltail, galleta, blue grama, big sagebrush, and rabbitbrush. Severe deterioration is indicated by a heavy infestation of big sagebrush and/or rabbitbrush with very little herbaceous understory.

In addition to domestic livestock, this site is well suited to use by deer, elk, small mammals and birds.

Other Information:

Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month

Similarity Index	Ac/AUM
100 - 76	2.3 – 3.0
75 – 51	2.9 – 4.5
50 – 26	4.4 – 9.0
25 – 0	9.0+

Plant Part	Code	Species Preference	Code
Stems	**S**	**None Selected**	**NS**
Leaves	**L**	**Preferred**	**P**
Flowers	**F**	**Desirable**	**D**
Fruits/Seeds	**F/S**	**Undesirable**	**U**
Entire Plant	**EP**	**Not Consumed**	**NC**
Underground Parts	**UP**	**Emergency**	**E**
		Toxic	**T**

Plant Preference by Animal Kind:

Animal Kind: Livestock
Animal Type: Cattle

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Western Wheatgrass	Pascopyrum smithii	EP	D	D	P	P	P	D	D	D	D	D	D	D
Alkali Sacaton	Sporobolus airoides	EP	D	D	D	D	D	P	P	P	U	U	U	D
Bottlebrush Squirreltail	Elymus elymoides	EP	U	U	D	D	D	U	U	U	D	D	D	U
Muttongrass	Poa fendleriana	EP	D	D	D	D	D	D	D	D	D	D	D	D
Prairie Junegrass	Koeleria macrantha	EP	D	D	D	D	D	D	D	D	D	D	D	D
Galleta	Pleuraphis jamesii	EP	U	U	U	U	U	D	D	D	D	D	U	U
Spike Muhly	Muhlenbergia wrightii	EP	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
Blue Grama	Bouteloua gracilis	EP	D	D	D	D	P	P	P	P	P	D	D	D
Indian Ricegrass	Achnatherum hymenoides	EP	P	P	P	P	P	P	P	P	P	P	P	P
Fourwing Saltbush	Atriplex canescens	L/S	P	P	P	P	P	D	D	D	D	D	D	P
Shadscale	Ariplex confertifolia	L/S	D	D	P	P	P	U	U	U	D	D	D	D
Winterfat	Krascheninnikovia lanata	L/S	D	D	P	P	P	P	P	P	D	D	D	D
Some Forbs	Various	EP	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S

SUPPORTING INFORMATION

Associated sites:

Site Name	Site ID	Site Narrative

Similar sites:

Site Name	Site ID	Site Narrative

State Correlation:

This site has been correlated with the following sites:

Inventory Data References:

Data Source	# of Records	Sample Period	State	County

Type Locality:

State: **New Mexico**

County: **Taos**

Latitude:

Longitude:

Township:

Range:

Section:

Is the type locality sensitive? **Yes** ☐ **No** ☐

General Legal Description:

Relationship to Other Established Classifications:

Other References:

Data collection for this site was done in conjunction with the progressive soil surveys within the New Mexico and Arizona Plateaus and Mesas 36 Major Land Resource Area of New Mexico. This site has been mapped and correlated with soils in the following soil surveys: McKinley and Sandoval.

Characteristic Soils Are:	
Billings	
Other Soils included are:	

Site Description Approval:

{PRIVATE}Author	Date	Approval	Date
Don Sylvester		Don Sylvester	

Site Description Revision:

{PRIVATE}Author	Date	Approval	Date
Elizabeth Wright	08/07/02	George Chavez	08/21/02